ET-61 October 1935

A CAGE FOR REARING MINUTE INSECTS

By E. V. Walter, Division of Cereal and Forage Insect Investigations,
Bureau of Entomology and Plant Quarantine
U. S. Department of Agriculture

A cage which has proved very satisfactory for the incubation of the eggs of the sorghum midge (*Contarinia sorghicola* Coq.) and its parasite *Eupelmus popa* Gir., and for the rearing of *E. popa* and other minute insects, is made as follows:

Melted wax is dripped on a microscope slide, thus forming a drop about five-eighths of an inch in diameter and about one-eighth of an inch high. After the wax has hardened, one or more holes approximately one-sixteenth to three-thirtyseconds of an inch in diameter, or larger if necessary, are made by twirling any bluntly rounded implement of the desired size through the wax to the glass. The upper surface of the wax is then scraped or carved perfectly smooth, leaving a thickness of about three-thirtyseconds of an inch. A five-eighths inch cover glass is then pressed lightly on the wax to complete the cage.

A high-melting-point paraffin of a grade used for microtome sectioning was found satisfactory for use in cool weather but too soft for permanency in hot summer weather. The sides of the pits would sometimes run together, thus entrapping the occupants, and in some cases the paraffin seemed to exude some oil that was detrimental to the delicate eggs. After trials of several waxes, a refined beeswax known to the trade as "white wax" proved to be the best material found.

Where a large number of such cages are desired, a clean photographic plate can be used instead of the microscope slide.

When the holes are made by means of a bluntly rounded implement, as described, the bottom of the pit will be rounded and smooth with no corners or creases to reflect the light. Examination of the cage with a binocular microscope can be easily made by reflecting light through the bottom of the glass slide.

When a humid condition was desired in the cage, two holes were made close together and connected by a slight depression in the wax. One of these was then used as the cage and a drop of water was placed in the other.

In cool weather it was sometimes difficult to make the cover glass stick to the hard wax. This difficulty was overcome by smearing a bit of vaseline on the outer edge of the wax.